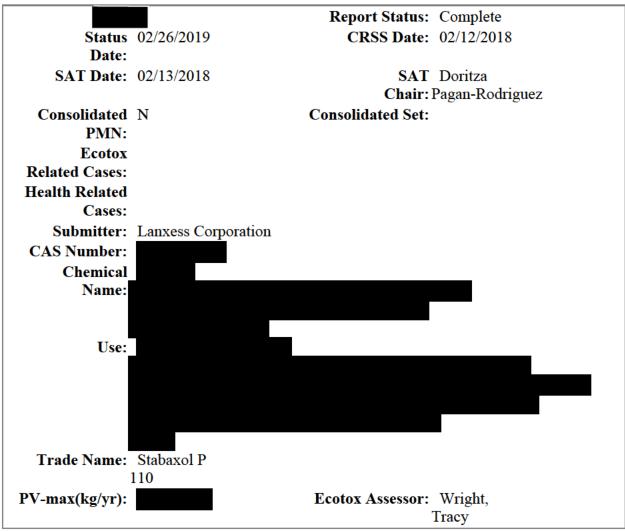
Ecotox Report for Case # P-18-0107

General



Fate Summary Statement

Fate P-18-0107

```
Summary
Statement: FATE: MW =  with < 500 and < 1000
             Solid with
             MP = 60-90 \, ^{\circ}C \, (M)
             S = Negl.
             VP < 1.0E-6 \text{ torr at } 25 \text{ }^{\circ}\text{C } (E)
             BP > 400 \, ^{\circ}C \, (E)
             H < 1.00E-8 (E)
            POTW removal (%) = 90
             via sorption
```

Time for complete ultimate aerobic biodeg > mo

Sorption to soils/sediments = v.strong

PBT Potential: P3B1

*CEB FATE: Migration to ground water = negl

PMN Material:

Overall wastewater treatment removal is 90% via sorption.

Sorption to sludge is strong based on high molecular volume.

Air

Stripping (Volatilization to air) is negligible based on high molecular volume

Removal by biodegradation in wastewater treatment is negligible based on high molecular volume.

The aerobic aquatic

biodegradation half-life is greater than months based on high molecular volume.

The anaerobic aquatic biodegradation half-life is greater

than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater than or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is

very strong based on high molecular volume.

Migration to groundwater

is negligible based on high molecular volume.

PMN Material:

High Persistence (P3) is based on the estimated anaerobic biodegradation half-life and high molecular volume.

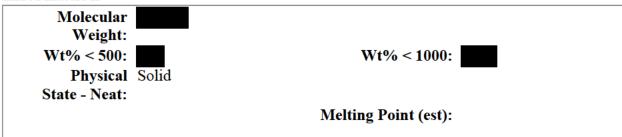
Low

Bioaccumulation potential (B1) is based on high molecular volume.

Bioconcentration/Bioaccumulation factor to be put into E-Fast: N/A.

Physical Chemical

Information



Melting 60.00 - Point: 90.00	
MP (EPI):	
Vapor Pressure:	Vapor Pressure (est): <0.000001
VP (EPI):	
Water Solubility:	Water Solubility (est): <0.000001
Water Solubility	
(EPI):	
Henry's Law::	
Log Koc:	Log
	Koc (EPI):
Log	Log
Kow:	Kow (EPI):
Log	
Kow Comment:	

SAT

Concern Level

Ecotox	1
Rating (1):	
Ecotox	
Rating Comment	
(1):	
Ecotox Rating	
(2):	
Ecotox	
Rating Comment	
(2):	
Ecotox Route of	No releases to
Exposure:	water

Ecotox Comments

Exposure	N
Based Review	
(Eco):	
Ecotox	
Comments:	
Exposure Based	
Testing:	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
3	1	2	

Eco-Toxicity Comment:

Fate Ratings

Removal9 in WWT/POTW	0					
(Overall):						
Condition	Rating		Rating l	Description		Comment
	Values	1	2	3	4	
Fish BCF:						
Log Fish BCF:						
WWT/POTW	3	Low	Moderate	Strong	V. Strong	
Sorption:						
WWT/POTW	4	Extensive	Moderate	Low	Negligible	
Stripping:						
Biodegradation	4	Unknown	High	Moderate	Negligible	
Removal:						
Biodegradation		Unknown	Complete	Partial		
Destruction:			*** *	3.6		
Aerobic Biodeg	4	<= D	Weeks	Months	> Months	
Ult:		Days	XX7 1	3.6 .1	> N.f. (1	
Aerobic Biodeg		<= D	Weeks	Months	> Months	
Prim:	4	Days	XX7 1	N.C. 41	> M _ /1	
Anaerobic	4	<= Dava	Weeks	Months	> Months	
Biodeg Ult: Anaerobic		Days <=	Weeks	Months	> Months	
Biodeg Prim:		_ Days	weeks	Months	/ Ivionuis	
Hydrolysis (t1/2		Days <=	Hours	Days	>= Months	
at pH		Minutes	пошѕ	Days	/- Months	
7,25C) A:		Williates				
Hydrolysis (t1/2		<=	Hours	Days	>= Months	
at pH		Minutes	110010	Dujs	1,10111115	
7,25C) B:						
Sorption to	1	V.	Strong	Moderate	Low	
Soils/Sediments:		Strong	2	-		
Migration to	1	Negligible	Slow	Moderate	Rapid	
Ground Water:					-	
Photolysis A,		Negligible	Slow	Moderate	Rapid	
Direct:						
Photolysis B,		Negligible	Slow	Moderate	Rapid	
Indirect:		NT 1' '11	CI	N. (1)	D '1	
		Negligible	Slow	Moderate	Rapid	

Removal 90 in WWT/POTW

(Overall):

Condition Rating Rating Description Comment Values 1 2 3 4

Atmospheric Ox

A, OH:

Atmospheric Ox Negligible Slow Moderate Rapid

B, O3:

Bio Comments: PMN

Material:

Overall wastewater treatment removal is 90% via sorption.

Sorption to sludge is strong based on high molecular volume.

Air

Stripping (Volatilization to air) is negligible based on high molecular volume.

Removal by biodegradation in wastewater treatment is

negligible based on high molecular volume.

The aerobic aquatic

biodegradation half-life is greater than months based on high molecular volume.

The anaerobic aquatic biodegradation half-life is greater

than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater than or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is

very strong based on high molecular volume.

Migration to groundwater

is negligible based on high molecular volume.

PMN Material:

High Persistence (P3) is based on the estimated anaerobic

biodegradation half-life and high molecular volume.

Low

Bioaccumulation potential (B1) is based on high molecular volume.

Bioconcentration/Bioaccumulation factor to be put into E-Fast:

N/A.

Fate PMN Material:

Comments: Overall

wastewater treatment removal is 90% via sorption.

Sorption to sludge

is strong based on high molecular volume.

Air Stripping

(Volatilization to air) is negligible based on high molecular volume.

Removal 9	00					
in WWT/POTW (Overall):						
Condition	Rating		Datir	g Descript	tion	Comment
Condition	Values	1	2	ig Descript	4	Comment
	v urues	1		<u> </u>	T	
F	Removal by	biodes	gradation in was	tewater tre	atment is neg	gligible based
	n high mol	_				56
	_		c biodegradatio	1		
			than months bas		molecular vo	olume.
	The					
a	naerobic ad	quatic b	oiodegradation l	alf-life is g	greater than n	nonths based on
t	he aerobic	biodegi	radation half-lif	e. The anae	robic biodeg	radation
			ed to be greater	han or equ	al to the aero	bic
	oiodegradat					
	-		d sediment is ve	•		
	-		gh molecular vo	lume.		
	Aigration to			_		
			n high molecula	r volume.		
	MN Mater	ial:				
	High	(D2) :	1 1 41	1	1: 1: 1	1 4
			based on the es		ierobic biode	egradation
			nolecular volun	ie.		
			tion potential gh molecular vo	Juma		
(DI) IS Dase	u OII III	gii iiioleculai v	nuille.		
F	Rioconcenti	ration/F	Bioaccumulation	factor to b	ne nut into E-	·Fast·
	√A.	WIOII/ L		140101 10 0	o par mro D	1 400.

Ecotoxicity Values

Test organism	Test Type	Test Endpoint	Predicted	Experimental Comments
Fish	96-h	LC50	*	Toxicity predictions are based on the negligible water solubility of P-18-0107 (insoluble nonionic polymer); * = no effects at saturation.
Daphnid	48-h	LC50	*	Toxicity predictions

Test organism	Test Type	Test Endpoint	Predicted	Experimental Comments
				are based on the negligible water solubility of
				P-18-0107 (insoluble
				nonionic
				polymer); $* = no$
				effects at
	061	F.C.50	*	saturation.
Green Algae	96-h	EC50	*	Toxicity predictions
				are based on the
				negligible water
				solubility of
				P-18-0107
				(insoluble
				nonionic
				polymer); $* = no$
				effects at
				saturation.
Fish	-	Chronic Value	*	Toxicity
				predictions
				are based on the
				negligible water solubility of
				P-18-0107
				(insoluble
				nonionic
				polymer); $* = no$
				effects at
				saturation.
Daphnid	-	Chronic Value	*	Toxicity
				predictions
				are based on the
				negligible water
				solubility of P-18-0107
				(insoluble
				nonionic
				polymer); * = no
				effects at
				saturation.
Green Algae	-	Chronic Value	*	Toxicity
8				predictions
				predictions

Test organism	Test Type	Test Endpoint	Predicted	Experimental	Comments
					are based on the
					negligible water
					solubility of
					P-18-0107
					(insoluble
					nonionic
					polymer); $* = no$
					effects at
					saturation.
Ecotox Value To	oxicity predict	ions are based on t	he negligibl	e	
Comments: w		of P-18-0107 (inso <1000; solid		1 2 //	
ne		ffective concentrat		· //	·
ar	nd mean measu	red concentrations			
<u> </u>	2.0 mg/L.				

Ecotox Factors

Factors	Most Sensitive	Assessment Factor	CoC	Comment
	Endpoint			
Acute Aquatic				Because hazards are not
(ppb):				expected up to the water
				solubility limit, acute and
				chronic
				concentrations of concern are not identified.
Chronic Aquatic				Because hazards are not
(ppb):				expected up to the water
				solubility limit, acute and
				chronic
				concentrations of concern are not
				identified.
Factors	Va	lues	Comments	
SARs:	Nonionic Po	lymers		
SAR Class:	Nonionic			
<u> </u>	Polymers-inso	oluble-		
TSCA			_	
NCC Category?	None			

Recommended	
Testing:	

Ecotox Factors Environmental

Comments: Hazard: Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risk because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA estimated environmental hazard of this new chemical substance using predictions based on the negligible water solubility of P-18-0107 (insoluble nonionic polymer). Acute and chronic toxicity values estimated for fish, aquatic invertebrates, and algae are all no effects at saturation. These toxicity values indicate that the new chemical substance is expected to have low environmental hazard. Because hazards are not expected up to the water solubility limit, acute and chronic concentrations of concern are not identified.

Environmental Risk:

Risks to the environment from acute and chronic exposure are not expected at any concentration of the new chemical substance soluble in the water (i.e., no effects at saturation).

Comments/Telephone Log

Artifac	ct	Update/Upload Time	